REMARKS

This response is intended as a full and complete response to the Office Action dated February 7, 2003. In the Office Action the Examiner notes that claims 1-15 are pending in the application of which claims 3 and 6 are withdrawn from further consideration. Additionally, claims 1, 2, 4, 5 and 7-15 are rejected. By this response, claims 1, 2, 4, 5 and 7-15 continue unamended and arguments refuting the Examiner's rejections are provided in detail below. As a matter of minor correction, it is respectfully submitted that claims 3 and 6 were, in fact, cancelled from the application in Applicant's last response dated December 12, 2002.

In view of the arguments provided below, the applicant submits that none of the claims now pending in the application are non-enabling, anticipated, or obvious under the respective provisions of 35 U.S.C. § 112, §102, and §103. Thus, the applicant believes that all of these claims are now in allowable form.

1) REJECTION OF CLAIMS UNDER 35 U.S.C. §102

The Examiner has rejected claims 1, 2, 4, 5 and 13 under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,493,335 issued December 10, 2002 to Darcie et al. (hereinafter Darcie). Specifically, the Examiner alleged that Darcie discloses a system for providing high speed data services especially for users with Ethernet equipment that includes a central office, a distribution fiber, a splitter and a plurality of drop fibers connected to end users. The Examiner further alleged that Darcie suggests that the central office includes an Ethernet adaptor circuit and that Darcie teaches methods for reducing the chance of or avoiding collision (as per column 6, lines 61 – column 8, line 60). The rejection is respectfully traversed.

"Anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the

claim" (Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co., 730 F.2d 1452, 221 USPQ 481, 485 (Fed. Cir. 1984)(citing Connell v. Sears, Roebuck & Co., 722 F.2d 1542, 220 USPQ 193 (Fed. Cir. 1983)) (emphasis added). Darcie fails to disclose each and every element of the claimed invention, as arranged in the claim.

Specifically, Darcie fails to disclose a data communication system that, according to claim 1 of the subject application, includes first and second network units that transmit modulated first and second signals to the head-end substantially simultaneously without collision. The subject invention includes at least a first and second network unit (ONU 20 as seen in Figure 2) that each modulate signals from a user device 30 for subsequent multiplexer (via CWDM). Once the modulated and multiplexed signal arrives at the splitter 40, it is combined with other modulated and multiplexed signals from other ONUs. Thus, all modulated and multiplexed signals share the common distribution fiber 50 (page 8, line 24 – page 10, line 19). Since multiple ONUs are providing information to the head-end in a modulated and multiplexed fashion, the information is, in fact, being transmitted substantially simultaneously. Accordingly, there are no collisions amongst said signals by virtue of the modulation scheme and design layout (see page 10, lines 20-24).

The Examiner's allegation that Darcie provides disclosure that reduces the chance of or avoids collision in the manner claimed is incorrect. Darcie contains a plurality of intermediate nodes (INs) 15 that are disposed between the head-end and the end users. The INs derive traffic information signals from upstream signaling and send the traffic information signals downstream to each end user. The INs either generate the traffic information signal or loop back at least a part of the signals or signaling from the end users. The standard CSMA scheme with collision detection or collision avoidance can then be deployed with the help of those INs regardless of whether the original network topology is a central control or peer to peer independent of the distance between the head-end and the end user (see Summary of Darcie). Accordingly, it is respectfully submitted that it is

not possible for a first network unit and a second network unit to transmit modulated first and second signals from first and second end users to the head-end substantially simultaneously without collision. In fact, Darcie is openly admitting to the fact that collisions can occur by employing the standard CSMA scheme with collision detection or avoidance and uses the traffic information signals within the system to indicate whether a channel is available for sending information prior to actually sending it. Accordingly, there is no substantially simultaneous transmission of first and second signals in the system of Darcie. As such, it is respectfully submitted that claim 1 is not anticipated by Darcie and is patentable under the statute.

Additionally, claims 2, 4-5 and 13 depend either directly or indirectly from claim 1 and recite additional features thereof. As such, and for at least the same reasons discussed above, the applicant submits that these dependent claims also fully satisfy the requirements under 35 U.S.C. § 102 and are patentable thereunder.

2) REJECTION OF CLAIMS UNDER 35 U.S.C. §103

The Examiner has rejected claims 7-12 and 14-15 as being obvious and unpatentable over Darcie and various combinations of secondary references listed as follows:

Claims 7, 9 and 12 rejected over Darcie in view of U.S. Patent No. 5,528,582, issued June 18, 1996 to Bodeep et al. (hereinafter Bodeep);

Claim 8 rejected over Darcie and Bodeep in view of U.S. Patent No. 6,137,607, issued October 24, 2002 to Feldman et al. (hereinafter Feldman);

Claim 10 rejected over Darcie and Bodeep in view of U.S. Patent No. 5,896,211, issued April 20, 1999 to Watanabe (hereinafter Watanabe);

Claim 11 rejected over Darcie and Bodeep in view of U.S. Patent No. 5,550,666, issued August 27, 1996 to Zirngibl (hereinafter Zirngibl); and

Claims 14 and 15 over Darcie in view of Zirngibl.

Each of the rejections is respectfully traversed.

The test under 35 U.S.C. § 103 is not whether an improvement or a use set forth in a patent would have been obvious or non-obvious; rather the test is whether the claimed invention, considered as a whole, would have been obvious. Jones v. Hardy, 110 USPQ 1021, 1024 (Fed. Cir. 1984) (emphasis added). Thus, it is impermissible to focus either on the "gist" or "core" of the invention, Bausch & Lomb, Inc. v. Barnes-Hind/Hydrocurve, Inc., 230 USPQ 416, 420 (Fed. Cir. 1986) (emphasis added). Moreover, the invention as a whole is not restricted to the specific subject matter claimed, but also embraces its properties and the problem it solves. In re Wright, 6 USPQ 2d 1959, 1961 (Fed. Cir. 1988) (emphasis added).

Specifically, it has been argued above that Darcie does not anticipate the invention of the independent claim 1. That is, Darcie does not provide the required disclosure for a first and second network unit to transmit first and second signals to the head-end of a data communication system substantially simultaneously without collision. Each of the claims rejected under 35 U.S.C. §103 is a dependent claim which depends either directly or indirectly from claim 1 and includes the features thereof. Accordingly, Darcie in combination with any other reference still does not result in any other communication system as recited in Applicant's claim 1. That is, the various combinations offered by the Examiner still do not result in a device that can transmit first and second signals from first and second network units in a substantially simultaneous manner without collisions between said signals. As such and for at least the same reasons discussed above, the applicant submits that these dependent claims also fully satisfy the requirements under 35 U.S.C. § 103 and are patentable thereunder. Therefore, the applicant respectfully requests that the rejection be withdrawn.

CONCLUSION

Thus, the Applicant submits that claims 1, 2, 4, 5 and 7-15 are in condition for allowance. Accordingly, both reconsideration of this application and its swift passage to issue are earnestly solicited.

If, however, the Examiner believes that there are any unresolved issues requiring adverse final action in any of the claims now pending in the application, it is requested that the Examiner telephone Mr. Eamon J. Wall at (732) 530-9404 so that appropriate arrangements can be made for resolving such issues as expeditiously as possible.

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Respectfully submitted,

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